



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
---------------	-------------	----------------------	---------------------

AM-838-1-000

EXAMINER

ART. UNIT PAPER NUMBER

5

1763

DATE MAILED:

05/17/99

THE FOLLOWING INFORMATION IS FOR THE
PATENT ATTORNEY OF RECORD
PATENT MATERIALS UNIT
1000 BUNDEL AVENUE
SUITE 1000 NEW YORK, NY 10024

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire three month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☐ Claims 1 - 30 + 46 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1 - 30 + 46 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Art Unit: 1763

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12, 15-30 and 46 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nagashima (EP 045088), Sivaramakrishnan (EP 0602595) and Siegle (5,607,002) in view of Langford (The Making, Shaping and Treating of Steel) or Maruhashi (4,594,114). Nagashima (col. 4, line 36), Sivaramakrishnan (col. 3, lines 50-52 and col. 5, lines 53-54) and Siegle (col. 2, line 11 and col. 23, lines 40-60) all teach the use of stainless steel as a material of construction of semiconductor processing apparatus of the type contemplated by applicants. They do not discuss the amount of nickel in their stainless steel. Langford and Maruhashi make clear that stainless steel having little or no nickel is common and well known as corrosion resistant material. It would have been prima facie obvious to one skilled in the art to use a low nickel stainless steel in the apparatus of Nagashima, Sivaramakrishnan and Siegle, in the absence of a showing of unexpected results, commensurate in scope with the claims.

Claims 13-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the references cited above, taken in further view of Yamaguchi (5,520,858) and Stauffer (5,252,134). Yamaguchi (Fig. 1 and col. 2, line 10) and Stauffer (Figs. 2A and 2B and col. 7, lines 18-45) disclose gas bubblers and boilers for delivering reaction gases to semiconductor processing

Art Unit: 1763

apparatus. It would have been prima facie obvious to use low nickel stainless steel as a material of construction of these apparatus also.

Applicants' arguments have been considered but are not persuasive. Regarding the present apparatus claims, it is noted that none of these claims is limited to the use of a phosphorous containing material. Describing a container as "a liquid phosphorous precursor compound container" does not limit the container to use only with liquid phosphorous precursor. It is noted that a milk bottle, for example, is not limited to use only with milk, but can be filled with water if desired. Likewise, applicants' container can be used with precursor compounds other than phosphorous containing compounds. Therefore, the present apparatus claims are not commensurate in scope with any alleged showing of unexpected results contained in the affidavit presented with applicants' most recent response. Regarding method claim 28, which is limited by the recitation of liquid TEPO, TMP, or TEP, it is noted that this claim recited a nickel content of less than 10% of the stainless steel. Applicants have not presented evidence that the 10% nickel level presents any unexpected results. Applicants' affidavit states (page 3, last 4 lines) that any reduction in nickel content from SST 316 "appears to be superior", and "is believed" to produce superior results. Applicants, however do not appear to have conducted any tests to confirm that 10% nickel content is a critical value to produce unexpected results.

Applicants' affidavit also refers to a Chemical Composition chart as Exhibit A, but this paper is not present in the patent office file. Applicants are requested to provide another copy of this exhibit.

Art Unit: 1763

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (703) 308-1895.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

RICHARD BUEKER
PRIMARY EXAMINER
ART UNIT 1763